lar shape. For instance, the encapsulating structure can comprise an annular front enclosure and an annular rear enclosure joined at inner and outer edges thereof. The annular front enclosure and the annular rear enclosure can made of plastic or other materials. Joining of the annular front enclosure and the annular rear enclosure can be by a weld, or the annular front enclosure can be formed in a first injection molding stage after which the annular rear enclosure is injection molded onto the annular front enclosure (or vice versa). In these and other embodiments, the encapsulating structure can comprise an annular front enclosure, an annular back enclosure, an annular inner side enclosure and an annular outer side enclosure and wherein the annular front enclosure and the annular back enclosure are joined to the annular inner side enclosure and the annular outer side enclosure by adhesive. In these and other embodiments, an alignment module can also comprise: a rotational alignment component comprising a rectangular magnet, and the encapsulating structure can hold the rectangular magnet in a fixed position outboard of the annular magnetic alignment component.

[0433] In some embodiments, an alignment module can comprise: an annular magnetic alignment component including a plurality of arcuate magnets; a rotational alignment component comprising a rectangular magnet and disposed outside a perimeter of the annular magnetic alignment component; and an encapsulating structure holding the annular magnetic alignment component and the rotational alignment component in a fixed spatial relationship to each other. Each arcuate magnet can have: an inner arcuate region having a magnetic polarity oriented in a first axial direction; an outer arcuate region having a magnetic polarity oriented in a second axial direction opposite the first axial direction; and a non-magnetized central arcuate region disposed between the inner arcuate region and the outer arcuate region. In these and other embodiments, the encapsulating structure can comprise: a front planar layer; a back planar layer; and a magnet-holding layer, the magnet-holding layer having a circular opening therethrough to accommodate the annular magnetic alignment component and a rectangular opening therethrough to accommodate the rectangular magnet. In these and other embodiments, the magnet-holding layer, the arcuate magnets, and the rectangular magnet can have equal thicknesses, and the magnet-holding layer includes a disc of material filling a region inboard of the annular magnetic alignment component. In these and other embodiments, a first adhesive layer can attach the front planar layer to the magnet-holding layer, and a second adhesive layer can attach the back planar layer to the magnet-holding layer. In these and other embodiments, the front planar layer and the back planar layer can be rectangular layers with rounded corners. In these and other embodiments, the encapsulating structure can have an opening through a region inside an inner perimeter of the annular magnetic alignment component.

[0434] In some embodiments, an alignment module can comprise: an annular magnetic alignment component including a plurality of arcuate magnets, an encapsulating structure surrounding and holding the arcuate magnets in an annular arrangement; and a near-field communication (NFC) coil disposed within the encapsulating structure and coaxial with the annular magnetic alignment component, the NFC coil coupled to an NFC tag circuit. In these and other embodiments, each arcuate magnet can have: an inner arcuate region having a magnetic polarity oriented in a first axial direction; an outer arcuate region having a magnetic polarity oriented in a second axial direction opposite the first axial direction; and a non-magnetized central arcuate region disposed between the inner arcuate region and the outer arcuate region. In these and other embodiments, the NFC coil can be disposed inboard of the annular magnetic alignment component, and other NFC tag circuit components can be disposed inboard of the annular magnetic alignment component and or in gaps between certain arcuate magnets of the annular magnetic alignment component. In these and other embodiments, the encapsulating structure can comprise: a front planar layer; a back planar layer; and a magnet-holding layer, the magnet-holding layer having a circular opening therethrough to accommodate the annular magnetic alignment component (and the NFC coil). In these and other embodiments, the magnet-holding layer and the arcuate magnets can have equal thicknesses. In these and other embodiments, the magnet-holding layer can include a disc of material filling a region interior to the annular magnetic alignment component and the NFC coil. In these and other embodiments, an alignment module can further comprise: a rotational alignment component comprising a rectangular magnet and disposed outboard (or outside a perimeter) of the annular magnetic alignment component, and the magnet-holding layer can have a rectangular opening therethrough to accommodate the rotational alignment component.

[0435] Accordingly, although the invention has been described with respect to specific embodiments, it will be appreciated that the invention is intended to cover all modifications and equivalents within the scope of the following claims.

What is claimed is:

1. An alignment module comprising:

an annular magnetic alignment component including a plurality of arcuate magnets, each arcuate magnet having:

an inner arcuate region having a magnetic polarity oriented in a first axial direction;

an outer arcuate region having a magnetic polarity oriented in a second axial direction opposite the first axial direction; and

a non-magnetized central arcuate region disposed between the inner arcuate region and the outer arcuate region; and

an encapsulating structure surrounding and holding the arcuate magnets in an annular arrangement.

2. The alignment module of claim **1** further comprising:

a rotational alignment component comprising a rectangular magnet,

wherein the encapsulating structure further holds the rectangular magnet in a fixed position outboard of the annular magnetic alignment component.

3. The alignment module of claim **1** wherein the encapsulating structure has an annular shape.

4. The alignment module of claim **3** wherein the encapsulating structure comprises an annular front enclosure and an annular rear enclosure joined at inner and outer edges thereof.

5. The alignment module of claim **4** wherein the annular front enclosure and the annular rear enclosure are made of plastic.